REMARKS

In accordance with the foregoing, claim 16 has been cancelled without prejudice or disclaimer, claims 1-4, 6-8, 10, 12-13, 15, 17, 19, 21, and 25-31 have been amended, and claims 32-35 have been added. No new matter is being presented, and approval and entry are respectfully requested.

According to the Office Action, claims 1, 3, 6, 7, 10-15, and 17-31 stand objected to. Because claims 15, 30, 32, 33, 34, and 35 have been amended or added incorporating recitations from the objected claims, it is respectfully requested that these claims be allowed.

Claims 1-15 and 17-35 are pending and under consideration.

REJECTION UNDER 35 U.S.C. § 102:

In the Office Action, at page 2, claim 13 is rejected under 35 U.S.C. § 102 in view of U.S. Patent No. 6,603,446 to Kanazawa ("the '446 patent"). This rejection is traversed and reconsideration is requested.

According to the '446 patent, an addressing pulse is applied selectively to the address electrodes. See column 7, lines 25-43. Further, a voltage Vx is applied to odd-numbered X electrodes, and a voltage of 0 V is applied to the even-numbered X electrodes. However, the '446 patent is silent as to teaching or suggesting, "separately carrying out in temporal a plurality of discharges of an initial stage of a sustain discharge period by each adjacent odd electrode or each adjacent even electrode," as recited in independent claim 13. Rather, in the '446 patent, a discharge occurs in regions or discharge slits at a side of an odd-numbered X electrode to which the voltage Vx has been applied.

In addition, rather than teaching or suggesting, "setting low one or both voltages of said first electrodes and said second electrodes, where the sustain discharge is not carried out," as recited in independent claim 13, the '446 patent generally describes that a potential difference Vs is not produced between an odd-numbered X electrode and an even-numbered Y electrode which surround even-numbered discharge slits and between an even-numbered X electrode and an odd-numbered Y electrode. See column 8, lines 1-4. Thus, in the '446 patent, sustaining discharge is carried out in odd-numbered display cells alone. Nothing in the '446 patent teaches setting low one or both voltages of the X electrodes and the Y electrodes.

Accordingly, it is respectfully asserted that independent claim 13 and related dependent claim 14 are not anticipated by the '446 patent. It is respectfully requested that the claims be allowed.

REJECTION UNDER 35 U.S.C. § 103:

In the Office Action, at page 3, claims 1, 3, 6-7, 15, 17, 19, and 21-31 are rejected under 35 U.S.C. § 103 in view of U.S. Patent No. 6,392,344 to Hong ("Hong") and U.S. Patent No. 6,404,411 to Masuda ("Masuda"). The rejection is traversed and reconsideration is requested.

Because claims 15 and 30 have been amended or added incorporating recitations from the objected claims, it is respectfully requested that claims 15 and 30 and related dependent claims be allowed.

The Office Action correctly recognized that Hong fails to teach or suggest the recitations of carrying out an auxiliary discharge and carrying out the sustain discharge of independent claims 1, 27, and 28. Accordingly, the Office Action relies on Masuda as teaching such recitations.

However, as shown in FIGS. 10A and 11A and corresponding description of Masuda, an auxiliary pulse P22 is impressed onto an X-electrode 22 and rises only for a predetermined period (pulse width) t22 after a predetermined time t11 has passed from a rise of a bulk reset pulse P21 (selective reset pulse P36). See column 9, lines 1-20. The auxiliary pulse P22 of Masuda is not used to "decrease a volume of wall charges, accumulated on a display cell in which a sustain discharge is not intended, to a level that cannot generate the sustain discharge," as recited in independent claim 1.

Contrary to the assertions made in the Office Action that the description provided in columns 7, lines 1-10, and column 10, lines 1-21, of Masuda, the cited reference merely described in these columns that a signal waveform impressed to the address A electrode 29, the address pulse P10 impressed to select the discharge panel, and a light emitting operation of FIG. 7D. However, Masuda fails to teach or suggest, "carrying out the sustain discharge by alternately applying sustain pulses to said first and second electrodes, wherein the auxiliary discharge is carried out by applying a voltage pulse, having the same polarity as the voltage pulse for carrying out the address discharge, between said second electrodes and said third electrodes," as recited in independent claim 1.

Accordingly, even assuming *arguendo*, that Hong and Masuda were combined, a combination of the cited references would fail to teach or suggest all the recitations of independent claim 1. The combination of the cited references would be silent as to teaching or suggesting, "carrying out an auxiliary discharge to decrease a volume of wall charges, accumulated on a display cell in which a sustain discharge is not intended, to a level that cannot generate the sustain discharge; and carrying out the sustain discharge by alternately applying sustain pulses to said first and second electrodes, wherein the auxiliary discharge is carried out by applying a voltage pulse, having the same polarity as the voltage pulse for carrying out the address discharge, between said second electrodes and said third electrodes," as recited in independent claim 1.

Because independent claims 27 and 28 include similar claim features as those recited in independent claim 1, although of different scope, and because the Office Action refers to similar portions of the cited references to reject independent claims 27 and 28, the arguments presented above supporting the patentability of independent claim 1 are incorporated herein to support the patentability of independent claims 27 and 28.

Referring to independent claim 25, the Office Action correctly recognized that Hong fails to teach or suggest, "rapidly changing a pulse voltage until the pulse voltage becomes equivalent to a voltage of the scan pulse, at an end stage of the erasing pulse," as recited in independent claim 25. Accordingly, the Office Action relies on Masuda as teaching such recitations.

Masuda generally describes impressing the negative auxiliary pulse P22', lowering the voltage of the scan pulse P26 impressed to the Y electrode 23 and the pulse width t22, and changing time t11 depending on a number of sustain pulses. However, Masuda does not describe how this time t11 may be changed. Furthermore, Masuda does not broach the concept of, at an end stage of an erasing pulse, "rapidly changing a pulse voltage until the pulse voltage becomes equivalent to a voltage of the scan pulse," as recited in independent claim 25.

Thus, even assuming *arguendo*, that Hong and Masuda were combined, a combination of the cited references would fail to teach or suggest all the recitations of independent claim 25.

In view of the foregoing, it is respectfully asserted that Hong and Masuda do not teach all the recitations of independent claims 1, 25, 27, and 28 and related dependent claims. It is respectfully requested that the claims be allowed.

In the Office Action, at page 11, claims 10-11 are rejected under 35 U.S.C. § 103 in view of U.S. Patent No. 6,140,984 to Kanazawa ("the '984 patent") and Masuda. The rejection is traversed and reconsideration is requested.

The arguments presented above are incorporated herein to support the patentability of claim 10/27 and 11/27 over Masuda.

The '984 patent generally provides a method of operating a plasma display panel capable of performing a stable discharge in a plasma display panel characterized by a small cell pitch and a narrow non-discharge slit. The Office Action correctly recognized that the '984 patent fails to teach or suggest, "carrying out an address discharge between said second electrodes and said third electrodes; and carrying out a sustain discharge by alternately applying sustain pulses to said first and second electrodes, wherein an auxiliary discharge is carried out between said first electrodes and said third electrodes, and between the address discharge and the sustain discharge," as recited in independent claim 27. Accordingly, the Office Action relied on Masuda as teaching such recitations.

However, as previously asserted, Masuda, similarly to the '984 patent, fails to teach or suggest the recitations of carrying out the address discharge and the carrying out of the sustain discharge as recited in independent claim 27. Thus, even assuming *arguendo*, that the '984 patent and Masuda were combined, a combination of the cited references would fail to teach or suggest all the recitations of independent claim 27.

In view of the foregoing, it is respectfully asserted that the '984 patent and Masuda do not teach all the recitations of independent claim 27 and related dependent claims. It is respectfully requested that the claims be allowed.

In the Office Action, at page 13, claim 12 is rejected under 35 U.S.C. § 103 in view of Hong and U.S. Patent No. 6,140,984 to Kanazawa ("the '984 patent"). The rejection is traversed and reconsideration is requested.

The Office Action correctly recognized that Hong fails to teach or suggest, "oppositely driving said second electrodes into an odd electrode group and an even electrode group in temporal; and setting a voltage of any of said second electrodes finishing an address process lower than a non-selection voltage of said second electrode when carrying out the address process and after finishing an address period of one of said odd and even electrode groups," as

recited in independent claim 12. Accordingly, the Office Action relied on the '984 patent as teaching such recitations.

The '984 patent generally provides that the second electrodes (Y-electrodes) are oppositely driven into an odd electrode group (Y1, Y3, ...) and an even electrode group (Y2, Y4, ...) in temporal. However, similarly to Hong, the '984 patent fails to teach or suggest, "**setting** a **voltage of any of said second electrodes finishing an address process lower than a non-selection voltage** of said second electrode when carrying out the address process and after finishing an address period of one of said odd and even electrode groups," emphasis added, as recited in independent claim 12. Rather, the '984 patent limits its description to applying a voltage lower than the voltage Vx applied to the X electrode not selected. See abstract, column 14, lines 45-67, and column 17, lines 1-8 and lines 60-67. The voltage Vx is applied to the selected X electrode 207 for as long as an address cycle, which is an addressing time for each display line. However, the '984 patent does not teach or suggest that the voltage is set for any of the second electrodes finishing an address process lower than the non-selection voltage of the X electrode not selected.

Thus, even assuming *arguendo*, that the '987 patent and Hong were combined, a combination of the cited references would fail to teach or suggest all the recitations of independent claim 12.

In view of the foregoing, it is respectfully asserted that the '984 patent and Hong do not teach all the recitations of independent claim 12. It is respectfully requested that independent claim 12 be allowed.

In the Office Action, at page 14, claim 14 is rejected under 35 U.S.C. § 103 in view of U.S. Patent No. 6,603,446 to Kanazawa ("the '446 patent") and U.S. Patent No. 6,288,692 to Kanazawa ("the '692 patent"). The rejection is traversed and reconsideration is requested.

The arguments presented above are incorporated herein to support the patentability of claim 14/13 over the '446 patent.

According to the '692 patent, one of the second electrode driving circuit and third electrode driving circuit applies a sustaining discharge pulse that is out of phase with the first sustaining discharge pulse, and the other one thereof applies a given constant voltage or retains the associated electrodes at high impedance. However, similarly to the '446 patent, the '692

patent fails to teach or suggest, "**separately carrying out in temporal** a plurality of discharges of an initial stage of a sustain discharge period by each adjacent odd electrode or each adjacent even electrode; and setting low one or both voltages of said first electrodes and said second electrodes, where the sustain discharge is not carried out," emphasis added, as recited in independent claim 13. The references are silent as to providing such claimed recitations.

Thus, even assuming *arguendo*, that the '446 patent and the '692 patent were combined, a combination of the cited references would fail to teach or suggest all the recitations of independent claim 13.

In view of the foregoing, it is respectfully asserted that the '446 patent and the '692 patent do not teach all the recitations of independent claim 13. It is respectfully requested that independent claim 13 and related dependent claim 14 be allowed.

In the Office Action, at page 15, claims 18 and 20 are rejected under 35 U.S.C. § 103 in view of Hong, Masuda, and U.S. Patent No. 6,208,092 to Kim ("Kim"). The rejection is traversed and reconsideration is requested.

Because claim 15 has been amended incorporating recitations from the objected claims, it is respectfully asserted that the rejection to the claim is rendered moot. Thus, it is respectfully requested that claim 15 and related dependent claims 18 and 20 be allowed.

CONCLUSION:

In accordance with the foregoing, it is respectfully submitted that all outstanding objections and rejections have been overcome and/or rendered moot, and further, that all pending claims patentably distinguish over the prior art. There being no further outstanding objections or rejections, the application is submitted as being in condition for allowance, which action is earnestly solicited.

If the Examiner has any remaining issues to be addressed, it is believed that prosecution can be expedited by the Examiner's contacting the undersigned attorney for a telephone interview to discuss resolution of such issues.

If there are any underpayments or overpayments of fees associated with the filing of this Amendment, please charge and/or credit the same to our Deposit Account No. 19-3935.

Respectfully submitted,

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I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450
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